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JC80

A

$$\begin{bmatrix} n & \sum_{i \in A} x_i & \sum_{i \in A} y_i \\ \sum_{i \in A} x_i & \sum_{i \in A} x_i^2 & \sum_{i \in A} x_i y_i \\ \sum_{i \in A} y_i & \sum_{i \in A} x_i y_i & \sum_{i \in A} y_i^2 \end{bmatrix} \begin{bmatrix} b_2 \\ a_{21} \\ a_{22} \end{bmatrix} = \begin{bmatrix} \sum_{i \in A} Lat_i \\ \sum_{i \in A} x_i Lat_i \\ \sum_{i \in A} y_i Lat_i \end{bmatrix} \quad (5b)$$

Page 13, line 16, in the numerator of the right-hand side of formula "(6)," after  
"a<sub>21</sub>x<sub>i</sub> +" insert ---a<sub>22</sub>y<sub>i</sub> +---.

A2

$$s = \sqrt{\frac{\sum_{i \in A} [(\hat{a}_{11}x_i + \hat{a}_{12}y_i + \hat{b}_1 - Lon_i)^2 + (\hat{a}_{21}x_i + a_{22}y_i + \hat{b}_2 - Lat_i)^2]}{n - 3}} \quad (6)$$

### In the Claims

Please amend the Claims 7, 9, 17, 18, 19, 20, add new Claims 21-23 and cancel Claims 1-6, 8, 10-16.

A3

7. (Amended) A system that enables the georeferencing of a digital raster map, comprising:  
a processing platform for executing code capable of georeferencing a digital raster map;  
and  
a storage platform comprising cache memory for storing at least the digital raster map,  
the storage platform being coupled to the processing platform.---

A4

9. (Amended) A system that enables the georeferencing of a digital raster map, comprising:  
a processing platform for executing code capable of georeferencing a digital raster map;  
and  
a storage platform comprising non-cache volatile storage for storing at least the digital  
raster map, the storage platform being coupled to the processing platform.

*sw*  
*bv*

17. (Amended) A data signal comprising a data structure that is capable of georeferencing a raster map, by:

providing for display a first map and a second map, the first map being a digital raster map, and the second map being a previously georeferenced map, the first and second maps covering substantially the same geographic area when they are displayed;

receiving an entry identifying a first point pair, one point being on each map;

receiving an entry identifying a second point pair, one point being on each map, the corresponding points of the point pairs having approximately the same geographic location on each map;

assigning to the points on the first map a longitude coordinate and a latitude coordinate which is identical to the longitude coordinate and latitude coordinate of their corresponding points on the second map: and

*AS*

computing a georeferencing function based on the pixel coordinates of the points of the first point pair on the first map and the geographic coordinates of the points of the second point pair on the second map.

18. (Amended) A data signal as in Claim 17, wherein:

as a result of the receiving steps, the points of the point pairs comprise [receiving a] marks on the first map at respective locations and marks on the second map at corresponding locations.

19. (Amended) A data signal as in Claim 17, wherein:

more than two point pairs are identified and are used to compute the georeferencing function pursuant to a transformation technique, and

which further comprises executing a validation check of the georeferencing function pursuant to a standard deviation technique.

20. (Amended) A data signal as in Claim 19 wherein the data structure is capable of rejecting a point pair when the point pair deviates a predetermined amount from a predetermined

AS  
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standard error.

21 (New) A data signal as in Claim 19, wherein:  
at least four points are identified and are used to compute the georeferencing function  
pursuant to a general linear transformation.

22. (New) A data signal as in Claim 19, wherein:  
at least three points are identified and are used to compute the georeferencing function  
pursuant to a general rotational linear transformation.

23. (New) A system for georeferencing a digital raster map, comprising  
a processing platform for executing code capable of georeferencing a digital raster map;  
and  
a storage platform coupled to the processing platform for storing at least a digital raster  
map, the storage map comprising  
facilities for providing for display a first map and a second map, the first map being a  
digital raster map, and the second map being a previously georeferenced map, the first and  
second maps covering substantially the same geographic area when they are displayed;  
facilities for receiving an entry identifying a first point pair, one point being on each map;  
facilities for receiving an entry identifying a second point pair, one point being on each  
map, the corresponding points of the point pairs having approximately the same geographic  
location on each map;  
facilities for assigning to the points on the first map a longitude coordinate and a latitude  
coordinate which is identical to the longitude coordinate and latitude coordinate of their  
corresponding points on the second map; and  
facilities for computing a georeferencing function based on the pixel coordinates of the  
points of the first point pair on the first map and the geographic coordinates of the points of the  
second point pair on the second map.